ABSTRACT

The implantable medical devices are configured to release at least one therapeutic agent from a matrix affixed to the implantable body with a release profile which is programable to the agent and treatment. The matrix is formed such that the concentration of the therapeutic agent in the matrix varies as a gradient relative to a surface of the implantable body. The change in the concentration gradient of the agent in the matrix directly controls the rate of elution of the agent from the matrix. The therapeutic agent matrix can be disposed in the stent or on surfaces of the stent in various configurations, including within volumes defined by the stent, such as openings, holes, or concave surfaces, as a reservoir of agent, and alternatively as a coating on all or a portion of the surfaces of the stent structure.